(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 11 March 2004 (11.03.2004)

(10) International Publication Number WO 2004/020779 A1

(51) International Patent Classification⁷: E21B 33/035, F16K 31/528, 31/04

(21) International Application Number:

PCT/EP2003/009697

(22) International Filing Date:

1 September 2003 (01.09.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 202 13 389.3

30 August 2002 (30.08.2002)

- (71) Applicant (for all designated States except US): COOPER CAMERON CORPORATION [US/US]; 1333 West Loop South, Suite 1700, Houston, TX 77027-9109 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): BIESTER, Klaus [DE/DE]; Am Maschsee 2, 29342 Wienhausen (DE).
- (74) Agent: HILGERS, Hans; Grünecker, Kinkeldey, Stockmair & Schwanhäusser, Maximilianstrasse 58, 80538 München (DE).

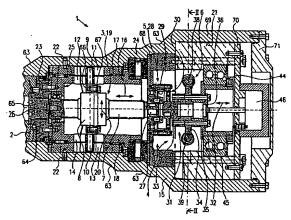
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ROTATING REGULATING DEVICE



(57) Abstract: A rotating regulating device (1) for the rotation and/or linear displacement of an actuating element (2) of a valve, throttle, blowout preventer or similar, in particular in the field of gas or oil supply, exhibits a spindle drive (3) and a drive train (4) rotationally driving the spindle drive, the said drive train exhibiting at least one reduction gear unit (5) and a drive device (6) connected to it for movement. In order that the regulation of the actuating element is possible in an extremely accurate, finely controlled and reproducible manner even with different drive devices and with simple and compact construction, the rotating spindle (7) or nut (8) of the spindle drive (3) exhibits at least one engaging element (9, 10), essentially protruding radially outwards, which engages guide slots (11, 12, 13, 14), whereby a first guide slot (11, 13) is fixed relative to a device housing (15) and a second guide slot (12, 14) can be rotated relative to the device housing and/or is supported for displacement in the longitudinal direction of the rotating spindle (16), whereby the guide slots (11, 13, 12, 14) exhibit at least different slopes in the longitudinal direction of the rotating spindle and the movable guide slot is connected for movement to the actuating element.